STATE OF DELAWARE DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL DIVISION OF AIR & WASTE MANAGEMENT

89 Kings Highway Dover, Delaware 19901



Solid & Hazardous Waste Management Branch

TELEPHONE: (302) 739-9403 Fax No.: (302) 739-5060

PERMIT FOR CORRECTIVE ACTION

Permittee:

E.I. du Pont de Nemours and Company, Inc.

DuPont Edge Moor White Pigment Plant

104 Hay Road

Edge Moor, DE 19809

State Permit Number:

HW-03A16

EPA Identification Number:

DED000800284

Pursuant to Title 7 of the <u>Delaware Code</u> (<u>Del. C.</u>), Chapters 60 and 63, and the *Delaware Regulations Governing Hazardous Waste* (DRGHW), this Permit is issued to E.I. du Pont de Nemours and Company, Inc. to implement corrective action at the DuPont Edge Moor White Pigment Plant in Edge Moor, Delaware at latitude 39° 44' 81" north and longitude 75° 30' 38" west.

The Permittee must comply with all terms and conditions of this Permit. This Permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in the DRGHW. Applicable regulations are those which are in effect on the date of issuance of this Permit in accordance with the DRGHW, § 122.32(c). This authorization shall not be used as a reason for non-compliance with any other applicable State or Federal regulation.

This Permit is based on information provided to the State of Delaware Department of Natural Resources and Environmental Control (DNREC) by the Permittee.

Any inaccuracies found in this submitted information may be grounds for the termination, revocation and reissuance, or modification of this Permit in accordance with the DRGHW, §§ 122.41, 122.42, and 122.43, and subject to enforcement in accordance with 7 <u>Del C.</u>, §§ 6005 and 6309. The Permittee must inform DNREC of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This Permit is effective as reissued as of March 14, 2006, and shall remain effective until March 14, 2016, unless revoked or reissued under the DRGHW, § 122.41, terminated under the DRGHW, § 122.43, or continued in accordance with the DRGHW, § 122.51(a).

Nancy C. Marker

Environmental Program Manager II

Solid and Hazardous Waste Management Branch

Date

NCM: RLC dtd

DuPont Edgemoor, Permits/RLC06014

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MODULE I

STANDARD PERMIT CONDITIONS

I. A. <u>EFFECT OF PERMIT</u>:

- 1. This Permit authorizes the implementation of corrective actions as necessary to protect human health and the environment.
- 2. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege, nor does it authorize any injury to persons or property, or invasion of other private rights, or any infringement of State or local laws or regulations (DRGHW §§ 122.30(g) and 122.40(b) and (c)). Compliance with this Permit during its term constitutes compliance, for purposes of enforcement, with 7 Del. C., Chapters 60 and 63, except for those requirements not included in the permit which become effective by statute or which are promulgated under the DRGHW, §§ 268 and 122.4(a). Compliance with the terms of this Permit does not constitute a defense to any Order issued or any action brought under 7 Del. C., Chapter 60; 7 Del. C., Chapter 63; 7 Del. C., Chapter 91; §§ 3008(a), 3008(h), 3013, or 7003 of RCRA; §§ 106(a), 104 or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et. seq. Commonly know as CERCLA); or any other law providing for protection of public health or the environment.

I.B. **PERMIT ACTIONS**:

1. Permit Modification, Revocation and Reissuance, and Termination:

This Permit may be modified, revoked and reissued, or terminated for cause, as specified in the DRGHW, §§ 122.41, 122.42, and 122.43. The filing of a request for a permit modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any permit condition (DRGHW § 122.30(f)).

2. Permit Renewal:

- a. This Permit may be renewed as specified in the DRGHW, § 122.30(b) and Permit Condition I.E.2.
- b. Review of any application for a permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicable regulations and laws.

I.C. SEVERABILITY:

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby (DRGHW § 124.12(a)(2)).

I.D. **DEFINITIONS**:

For purposes of this Permit, terms used herein shall have the same meaning as those in the DRGHW, unless this Permit specifically provides otherwise; where terms are not defined in the regulations or the Permit, the meaning associated with such terms shall be defined by 7 <u>Del. C.</u> or a standard dictionary reference or the generally accepted scientific or industrial meaning of the term. The following definitions also apply to this Permit:

- 1. Day A calendar day, the mean solar day beginning at midnight.
- 2. Facility For the purpose of management of a hazardous waste and implementing corrective action in Module II, as required by the DRGHW, § 264.101, facility means all contiguous property under the control of the owner or operator.
- 3. Hazardous Constituent Any constituent identified in Appendix VIII of the DRGHW § 261, or any constituent identified in Appendix IX of the DRGHW § 264.
- 4. Secretary Secretary of DNREC or his/her designee or authorized representative.
- 5. Release Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment.
- 6. Solid Waste Management Unit Any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

I.E. <u>DUTIES AND REQUIREMENTS</u>:

1. <u>Duty to Comply:</u>

The Permittee shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by a variance issued pursuant to 7 <u>Del. C.</u>, § 6314. Any permit noncompliance, other than noncompliance authorized by a variance, constitutes a violation of 7 <u>Del. C.</u>, Chapters 60 and 63 and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. Duty to Reapply:

If the Permittee wishes to continue an activity allowed by this Permit after the expiration date of this Permit, the Permittee shall submit a complete application for a new permit at least 180 days prior to the permit expiration.

3. <u>Permit Expiration</u>:

Pursuant to § 122.50 of the DRGHW, this Permit shall be effective for a fixed term of ten (10) years. Pursuant to § 122.51 of the DRGHW, as long as DNREC is the permit issuing authority, this Permit and all conditions herein will remain in effect beyond the Permit's expiration date, if the Permittee has submitted a timely, complete application and, through no fault of the Permittee, the Secretary has not issued a new permit under § 124.15 of the DRGHW on or before the expiration date of this Permit.

4. <u>Need to Halt or Reduce Activity Not a Defense</u>:

It shall not be a defense for the Permittee, in an enforcement action that it would have been necessary, to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

5. <u>Duty to Mitigate</u>:

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment and shall carry out such measures to prevent significant adverse impacts on human health and/or the environment.

6. <u>Proper Operation and Maintenance</u>:

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance/quality control procedures.

7. Duty to Provide Information:

The Permittee shall furnish to the Secretary, within a reasonable time, any relevant information which the Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to the Secretary, upon request, copies of records required to be kept by this Permit (DRGHW §§ 122.30(h) and 264.74(a)).

8. <u>Inspection and Entry:</u>

Pursuant to the DRGHW, § 122.30(i), the Permittee shall allow the Secretary, or an authorized representative, upon the presentation of credentials and other documents, as may be required by law, to:

- a. Enter the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;
- b. Have access to and copy any records that must be kept under the conditions of this Permit;
- c. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and
- d. Sample or monitor for the purposes of assuring permit compliance or as otherwise authorized by 7 <u>Del. C.</u>, Chapter 63 and the DRGHW, any substances or parameters at any location.

9. <u>Monitoring and Records</u>:

Pursuant to § 122.30(j) of the DRGHW, the Permittee shall comply with the following requirements:

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. All sampling and analyses shall be of adequate quality, scientifically valid, of known precision and accuracy, and of acceptable completeness, representativeness, and comparability. Laboratory analysis of each sample must be performed using an appropriate method for testing the parameter(s) of interest taking into account the sample matrix. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of the DRGHW, § 261, or an equivalent method approved by the Secretary. Analytical methods must be the appropriate method as specified in "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846", 3rd edition as updated or an equivalent method as approved by the Secretary.
- b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this Permit, the certification required by the DRGHW, § 264.73(b)(9), and records of all data used to complete the application for this Permit, for a period of at least three (3) years from the date of the sample, measurement, report, record, certification, or application. These periods may be extended by request of the Secretary at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility (DRGHW § 264.74). The Permittee shall maintain records from all groundwater monitoring wells and associated groundwater surface elevations for the active life of the facility, and, for disposal activities, for the post closure care period as well (DRGHW § 122.30(j)(2)).
- c. Pursuant to DRGHW, § 122.30(j)(3), records of monitoring information shall specify:
 - i. The dates, exact place, and times of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The dates analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.

10. Reporting Planned Changes:

The Permittee shall give notice to the Secretary, as soon as possible, of any planned physical alterations or additions to the facility that may impact the Solid Waste Management Units (SWMUs).

11. Reporting Anticipated Noncompliance:

The Permittee shall give advance notice to the Secretary of any activity or planned changes in the SWMUs, which may result in noncompliance with permit requirements.

12. <u>Transfer of Permits</u>:

a. This Permit is not transferable to any person, except after notice to the Secretary (DRGHW § 122.30(1)(3)). The Secretary may require modification or revocation and reissuance of this Permit pursuant to the DRGHW § 122.40, in order to identify the new Permittee and incorporate such other requirements as may be necessary under the appropriate Act.

b. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of the DRGHW, §§ 264 and 122 and this Permit (DRGHW § 264.12(c)).

3. <u>Incident Reporting</u>:

- a. The Permittee shall comply with Permit Conditions I.E.13.b and c, pursuant to the DRGHW, §§ 264.56 and 122.30(1)(6).
- b. The Permittee shall report to the Secretary any noncompliance which may endanger human health or the environment. Any such information shall be reported immediately from the time the Permittee becomes aware of the circumstances, provided there is no delay in emergency response results. The report shall include the following:
 - i. Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies;
 - ii. Any information of a release or discharge of hazardous waste, or of a fire or explosion from the hazardous waste management facility which could threaten the environment or human health outside the facility; and
 - iii. The description of the occurrence and its cause shall include:
 - 1) Name, address, telephone number of the owner or operator;
 - 2) Name, address, telephone number of the facility;
 - 3) Date, time, and type of incident;
 - 4) Name and quantity of materials involved;
 - 5) The extent of injuries, if any;
 - 6) An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
 - 7) Estimated quantity and disposition of recovered material that resulted from the incident.
- c. A written submission shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period(s) of noncompliance (including exact dates and times), whether the noncompliance has been corrected, and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Secretary may waive the five (5) day written notice requirement in favor of a written report within fifteen (15) days.

14. Other Noncompliance:

The Permittee shall report all instances of other noncompliance, not reported under I.E.13, immediately to DNREC. The reports shall be made within the timeframes and contain the information of Permit Conditions I.E.13.b and c.

15. Other Information:

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the application, or submitted incorrect information in an application or in any report to the Secretary, the Permittee shall promptly submit such facts or information.

I.F. SIGNATORY REQUIREMENT:

All applications or reports submitted to or requested by the Secretary, his/her designee, or authorized representative, shall be signed and certified in accordance with the DRGHW, §§ 122.11 and 122.30(k). In addition, certification by a Professional Engineer registered in the State of Delaware shall be provided as required by the DRGHW.

I.G. <u>APPROVAL/DISAPPROVAL OF SUBMISSIONS:</u>

DNREC will review the plans, reports, schedules and other documents (hereinafter collectively referred to as "submission") submitted which require DNREC approval. DNREC will notify the Permittee in writing of DNREC's approval, conditional approval, or disapproval of each submission.

Each submission required by this Permit is, upon approval by the Secretary, incorporated into this Permit. Any non-compliance with such DNREC-approved submission shall be deemed noncompliance with this Permit. A conditionally approved submission including any terms of such conditional approval set forth in DNREC's decision, shall constitute the DNREC-approved submission and shall be incorporated into this Permit.

In the event of DNREC's conditional approval of submission, DNREC shall specify, in writing, any deficiencies in the submission and the terms upon which approval of the submission is conditioned. If the Permittee disputes any term upon which approval of the submission was conditioned, the Permittee may initiate Dispute Resolution pursuant to Permit Condition I.I. In the event of DNREC disapproval of a submission, the Secretary shall specify the deficiencies in writing. Such disapproval shall not be subject to the Dispute Resolution provision set forth in Permit Condition I.I. The Permittee shall modify the submission to correct/address the specified deficiencies within a reasonable time period established by the Secretary taking into account the tasks to be performed, and submit the revised submission to DNREC for approval. If the revised submission is disapproved, DNREC will notify the Permittee of the deficiencies in writing and specify a schedule for the Permittee to correct the deficiencies as directed by DNREC and forward the revised submission to DNREC within the time period specified by DNREC. In the event the Permittee disagrees with DNREC's disapproval of the revised submission the Permittee shall notify DNREC in writing and the disagreement shall be resolved in accordance with the Dispute Resolution provision in Permit Condition I.I. of this Permit.

I.H. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE SECRETARY:

At least two (2) copies of all reports, notifications, or other submissions which are required by this Permit to be sent or directed to the Secretary, must be sent by Certified Mail; Return Receipt Requested, or hand delivery, or with prior DNREC approval, by e-mail, facsimile, or overnight delivery, to:

Department of Natural Resources and Environmental Control
Division of Air and Waste Management
Solid and Hazardous Waste Management Branch
89 Kings Highway
Dover, Delaware 19901
RE: DED000800284

Each report, notification, or other submission shall reference Permittee's name, permit number, and facility address. Any deviation from this requirement will result in the suspension of the delivery by e-mail, facsimile, or overnight delivery.

At least one (1) copy of each report, notification, or other submission must be a paper copy of the submission. The second copy may consist of either a paper copy or a DNREC-compatible electronic copy of the submission, unless otherwise specified by DNREC.

I.I. DISPUTE RESOLUTION:

Except as otherwise provided in this Permit, in the event the Permittee disagrees, in whole or in part, with DNREC disapproval of any submission required by this Permit, the Permittee shall notify DNREC in writing of its objections, and the basis therefore, within thirty (30) days of receipt of DNREC's disapproval.

Such notice shall set forth the specific matters in dispute, the basis for the Permittee's belief that its position is consistent with the permit requirements, and any supporting documentation.

DNREC and the Permittee shall have an additional thirty (30) days from DNREC's receipt of the notification to meet or confer to resolve any dispute. In the event an agreement is reached, the Permittee shall submit the revised submission and implement the same in accordance with such agreement.

In the event DNREC and the Permittee are not able to reach an agreement within this thirty (30) day period, the Permittee shall have the opportunity to submit written comments regarding DNREC's decision to, and receive a written decision from the DNREC Secretary or his delegate. DNREC will notify the Permittee in writing of its decision and the Permittee shall comply with the terms and conditions of DNREC's decision. The Permittee does not waive its right to assert any and all available defenses in a proceeding to enforce this Permit, nor does it waive any statutory or regulatory rights it may have, if any, to affirmatively challenge DNREC's decision in the dispute.

I.J. CONFIDENTIAL INFORMATION:

In accordance with the DRGHW, § 122.12, the Permittee may claim confidential any information required to be submitted by this Permit.

I.K. WASTE MINIMIZATION:

The Permittee shall certify no less often than annually that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that the Permittee generates to the degree determined by the Permittee to be economically practicable; and the proposed method of treatment, storage or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment. The Permittee shall maintain each such certification of waste minimization at the facility until closure of such facility (DRGHW § 264.73(b)(9)).

I.L. LAND DISPOSAL RESTRICTIONS:

All activities of the Permittee which involve the land disposal of hazardous waste are subject to the provisions of the DRGHW, § 268.

I.M. ANNUAL REPORTS:

Pursuant to the DRGHW, §§ 262.41 and 264.75, the Permittee shall meet Annual Reporting requirements. The Annual Report shall be submitted by March 1st of each calendar year and shall contain the information required in the DRGHW, §§ 262.41 and 264.75.

I.N. <u>HAZARDOUS WASTE CONTINGENCY PLAN:</u>

The Permittee shall maintain at the facility, for the duration of this Permit, a Hazardous Waste Contingency Plan to address potential releases from any SWMUs. This Hazardous Waste Contingency Plan shall be prepared in accordance with the applicable requirements of § 264 of the DRGHW.

I.O. DUTY TO MAINTAIN DOCUMENTATION AT THE FACILITY:

Pursuant to the DRGHW § 264.73, the Permittee shall maintain at the facility, during the term of this Permit, all documents required by this Permit and the DRGHW.

MODULE II

FACILITY-WIDE CORRECTIVE ACTION

II.A. <u>CORRECTIVE ACTION FOR CONTINUING RELEASES; PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT:</u>

- 1. Section 3004(u) of RCRA, 42 U.S.C. § 6924(u), and § 264.101 of the *Delaware Regulations Governing Hazardous Waste* (DRGHW), provide that all permits issued after November 8, 1984 must require corrective action as necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents from any solid waste management unit (SWMU), regardless of when waste was placed in the unit.
- 2. Under § 3004(v) of RCRA, 42 U.S.C. § 6924(v), §§ 6305(a)(3) and 6307(d) of 7 Del. C., Chapter 63, and § 264.101(c) of the DRGHW, DNREC may require that corrective action at a permitted facility be taken beyond the facility boundary where necessary to protect human health and the environment, unless the owner or operator of the facility concerned demonstrates to the satisfaction of DNREC that, despite the owner or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action.
- 3. Section 3005(c)(3) of RCRA, 42 U.S.C. § 6925(c)(3), §§ 6305(a)(3) and 6307(d) of 7 Del. C., Chapter 63, and § 122.32(a)(2) of the DRGHW provide that each permit shall contain such terms and conditions as the DNREC determines necessary to protect human health and the environment.
- 4. This Permit requires the Permittee to conduct a RCRA Facility Investigation (RFI) for potential or suspected releases of hazardous waste or hazardous constituents at specified SWMUs identified at the facility. The RFI will be performed under two phases, a Phase I RFI and a Phase II RFI. The purposes of the Phase I RFI are to evaluate the nature and extent of potential or suspected releases from SWMUs, to screen SWMUs from further investigation, to focus the RFI, and to determine whether interim/stabilization measures are necessary. The purpose of the Phase II RFI is to thoroughly evaluate the nature and extent of suspected releases of hazardous waste and hazardous constituents, and their degradation by-products from regulated units and SWMUs, at the facility based upon the findings in the Phase I RFI. The RFI includes the collection of site specific data and an evaluation of potential impacts to human health and the environment from potential or suspected contamination from the facility. The RFI will gather all data necessary for the DNREC to determine whether a Corrective Measures Study (CMS) is required. If, on the basis of the RFI findings and any other relevant information, the DNREC determines that a CMS is necessary, the Permittee will be required to conduct a CMS for those releases from SWMUs which threaten human health or the environment.
- 5. The Permittee may have completed some of the tasks required by this Permit and may have some of the information and data required by this Permit. Previous work may be used to meet the requirements of this Permit. Unless previously approved by the DNREC, such previous work must be submitted to and approved by the DNREC in accordance with permit conditions I.G. (Approval/Disapproval of Submissions).
- 6. The Permittee shall prepare facility-specific scopes of work and reports relating to Interim Measures, RCRA Facility Investigation, Corrective Measures Study, and any Risk Screening or Risk Assessment in accordance with EPA guidance documents available at http://www.epa.gov/reg3wcmd/ca/ca_resources.htm. The Permittee shall establish specific and appropriate elements of such scopes and reports to the DNREC's satisfaction under conditions I.G. of this Permit (Approval/ Disapproval of Submissions).

II.B. INTERIM MEASURES:

- 1. The Permittee may, at any stage of the RFI, if applicable, submit to the DNREC, in writing, a proposal to perform corrective action interim measures for the remediation of any release of hazardous waste or hazardous constituent at or from a SWMU. Any such proposal shall include a schedule for performance of such interim measures. For any releases to soil, groundwater, sediment and surface water, the Permittee must demonstrate in such proposal, to the DNREC's satisfaction, that the subsurface conditions and contaminant plume relating to such release have been adequately characterized and that the proposed interim measures will adequately remove, contain, or treat the released hazardous waste or hazardous constituents as necessary to protect human health and the environment. The nature and extent of releases to other media shall likewise be adequately characterized and evaluated by the Permittee in such a proposal. The DNREC shall review such proposal and determine whether such a proposal will be considered for approval and whether such interim measures are of such scope that they require implementation of the public notice requirements specified under II.F.1, Corrective Measures Remedy Selection. The DNREC shall notify the Permittee of the approval or disapproval of the interim measures proposal. If the DNREC approves such a proposal, the Permittee shall be allowed to dispense with certain stages of the investigation, as described in the DNREC's approval of the interim measures proposal. No term or condition of this Permit, except as otherwise provided for by this Permit, shall be affected by such proposal until such time as this Permit has been modified to include such proposal. As appropriate, the DNREC or the Permittee may seek modification of this Permit pursuant to § 6305(a)(3) of 7 Del. C., Chapter 63, and §§ 122.41 and 122.42 of the DRGHW.
- 2. If the DNREC determines, on the basis of information submitted by the Permittee pursuant to Permit Condition II.D. (RCRA Facility Investigation Phase I), II.E. (RCRA Facility Investigation Phase II), II.I. (Emergency Response; Release Reporting), or II.K. (Solid Waste Management Unit Assessment) or any other information, that corrective action is necessary to protect human health or the environment from a release of hazardous waste or constituents from a SWMU, the Permittee may be required to implement Interim Measures.
 - a. Within ninety (90) calendar days of receipt of the DNREC's notice to implement corrective action Interim Measures at specified SWMUs, the Permittee shall submit to the DNREC an Interim Measures Plan (Plan). The Plan must be approved by the DNREC in accordance with Permit Conditions I.G. (Approval/Disapproval of Submissions) of this Permit. This Plan shall be developed in accordance with EPA Guidance for Interim Measures available at http://www.epa.gov/reg3wcmd/ca/ca_resources.htm.
 - b. According to the approved schedule, the Permittee shall submit to the DNREC the plans required by the Interim Measure Design Program, as described in the EPA Guidance document for Interim Measures available at http://www.epa.gov/reg3wcmd/ca/ca/resources.htm. These plans must be approved by the DNREC in accordance with Permit Conditions I.G. (Approval/Disapproval of Submissions) of this Permit.

 - d. Nothing in this Permit shall preclude the Permittee from performing Interim Measures at any time either to reduce or eliminate the risk to human health or the environment, or to prevent or reduce the spread of contamination. Such measures, (e.g., source removal,

capping, groundwater pump and treat) may be taken at any time during the term of this Permit.

e. Nothing in this Permit shall limit the DNREC's authority to undertake or require any person to undertake response action or corrective action under any law, including but not limited to, 7 <u>Del. C.</u>, Chapter 63, as amended. Nothing in this Permit shall relieve the Permittee of any obligation it may have under any Federal or State law, including, but not limited to, § 103 of CERCLA, to report releases of hazardous waste, hazardous constituents or hazardous substances to, at, or from the facility.

II.C. RCRA FACILITY ASSESSMENT – RFA:

The EPA identified seventeen (17) potential Solid Waste Management Units ("SWMUs") at the facility in a letter, dated August 8, 1986. Additional SWMUs were identified by the Permittee after August 8, 1986, for a total of twenty-seven (27). All twenty-seven (27) of these potential SWMUs are listed in the Permittee's Facility-Wide Corrective Action Plan, dated November 23, 2004. The DNREC approved this document on December 2, 2004.

The RCRA Facility Assessment was completed with the above submittals.

II.D. RCRA FACILITY INVESTIGATION – RFI PHASE I:

1. Phase I RCRA Facility Investigation Plan Submission:

Within ninety (90) days of the effective date of this Permit, the Permittee shall submit for DNREC's approval, a Phase I RCRA Facility Investigation (RFI) Work Plan. The Phase I RFI Work Plan must be approved by the DNREC in accordance with Permit Conditions I.G. (Approval/Disapproval of Submissions Resolution). This Phase I RFI Work Plan shall meet the objectives and requirements specified below:

The Phase I RFI objectives are to:

- a. Characterize the presence, magnitude, extent, direction, concentration and rate of migration of releases of hazardous waste or hazardous constituents from each SWMU, into groundwater, surface water, air, and/or soil.
- b. Identify actual or potential human and/or ecological receptors, which can serve as Environmental Indicators for the site.
- c. Provide a detailed geologic and hydro-geologic characterization of the area surrounding and underlying each SWMU.
- d. Determine the need for and scope of corrective measures.
- e. Identify and characterize releases of hazardous waste or hazardous constituents, and hazardous constituent degradation by-products from SWMUs.

2. <u>Phase I RCRA Facility Investigation Plan Requirements:</u>

a. The RFI Phase I Work Plan shall be prepared in accordance with the EPA Guidance for RCRA Facility Investigations, available at http://www.epa.gov/reg3wcmd/ca/ca resources.htm, under Corrective Action Implementation Guidance. The Work Plan shall include the following sections: Project

Management Plan, Sampling and Analysis Plan, Health and Safety Plan, Community Relations Plan, and Schedule.

The Health and Safety Plan shall be prepared in accordance with appropriate guidance such as <u>Standard Operating Safety Guides</u>, USEPA, July 1988, and OSHA regulations at 29 CFR § 1910.120. While the DNREC may comment on the Health and Safety Plan, the DNREC will not approve or disapprove the Plan.

b. Phase I RFI Sampling and Analysis Plan:

- i. The Permittee shall submit a Phase I RFI Sampling and Analysis Plan (Plan). The Plan shall provide for analysis of hazardous waste and/or hazardous constituents released from each SWMU. All aqueous samples shall also be tested for pH. The Permittee shall propose a list of constituents for groundwater monitoring and analysis that considers the constituents specified in § 264 of the DRGHW, Appendix IX, Groundwater Monitoring List. Any hazardous constituent that is known or suspected by the Permittee to have been treated, stored, disposed or contained in the unit, shall also be included for analysis.
- ii. The Phase I RFI Sampling and Analysis Plan shall provide the rationale for the selection of sample locations and number of samples. The Permittee shall identify the specific sampling locations for each SWMU and for each affected environmental media.
- iii. The Phase I RFI Sampling and Analysis Plan shall include Sample Collection Methods and Procedures Plan and a Quality Assurance Project Plan. The Permittee shall also furnish to the DNREC the Laboratory Data Package.
- iv. The DNREC reserves the right to require the Permittee to furnish the DNREC with split samples for any samples taken by the Permittee pursuant to this Permit. Where split samples are taken and analyzed, the DNREC will provide the results to the Permittee for evaluation in the Phase I RCRA Facility Investigation Report. The Permittee shall identify a procedure in the Sampling Plan for notifying the DNREC of any planned sampling dates.
- v. The Phase I RFI Sampling Plan must identify the management and disposition of any wastes generated as a result of the investigation. If any of the SWMUs contain hazardous waste, the Permittee shall comply with applicable regulations including the Land Disposal Restrictions as contained in § 268 of the DRGHW.

3. Phase I RCRA Facility Investigation:

- a. The Permittee shall conduct the investigations in accordance with the EPA Guidance for RCRA Facility Investigations, available at http://www.epa.gov/reg3wcmd/ca/ca_resources.htm, under Corrective Action Implementation Guidance. This investigation is necessary to characterize the facility (Environmental Setting), define the source of any release of hazardous waste or hazardous constituents (Source Characterization), define the degree and extent of contamination (Contamination Characterization) and identify actual or potential receptors.
- b. The investigations must result in data of adequate technical quality to support the development and evaluation of the corrective measure alternative(s) during the Corrective

Measures Study. The Permittee shall implement the plan requirements described in Permit Condition II.E.2.

4. Phase I RCRA Facility Reporting Requirements:

- a. The Permittee shall fulfill the requirements of the approved Phase I RFI Plan in accordance with the terms and schedule set forth in such approved plan, including the submission of a Phase I RFI Report for the DNREC's approval. The Permittee shall submit copies of the Phase I RFI Report to the DNREC. The Permittee shall also submit quarterly (i.e., every four months) progress reports to the DNREC, beginning four months after the DNREC's approval of the plan and continuing until the RFI Report is submitted. The quarterly reporting shall include, at a minimum: activities completed within the reporting period, any deviations from the Phase I RFI Plan, and the identification and schedule of remaining activities. The DNREC shall include any other specifications in its approval of the Phase I RFI Plan.
- b. The Permittee may request an alternate progress-reporting schedule for the DNREC's approval. This request shall be submitted in writing and provide a justification for the alternate schedule. This alternate progress-reporting schedule may be approved by the DNREC without requiring a permit modification to Permit Condition II.D.4.

5. Phase I RCRA Facility Investigation Report:

- The Permittee shall submit a Phase I RCRA Facility Investigation (RFI) Report to the a. DNREC. The Phase I RFI Report shall include an analysis, summary and results of all investigations performed pursuant to the Phase I RFI Plan. The objectives of the Phase I RFI Report are to document that the investigation and data are sufficient in quality (e.g., quality assurance and quality control (QA/QC) procedures have been followed) and scope (quantity) to adequately characterize the nature and extent of contamination, potential threat to human health and the environment, and to support the Corrective Measures Study. The Phase I RFI Report shall conform to the applicable RFI requirements of EPA Guidance for RCRA **Facility** Investigations. available http://www.epa.gov/reg3wcmd/ca/ca resources.htm.
- b. The Phase I RFI Report shall include a discussion of the need for and feasibility of implementing interim measures immediately, (see Permit Condition II.B., Interim Measures).

II.E. RCRA FACILITY INVESTIGATION – RFI PHASE II:

Within ninety (90) days after the receipt of DNREC's approval of the Phase I RFI Report, the Permittee shall submit to DNREC, a Phase II RFI Work Plan.

In lieu of conducting a Phase II RCRA Facility Investigation, the Permittee may, if applicable, submit to the DNREC in writing, a proposal to perform corrective measures for the remediation of any release of hazardous waste or hazardous constituent at or from any SWMU. Any such proposal shall include a schedule for performance of such corrective measures. For any releases to soil and groundwater, the Permittee must demonstrate in such proposal, to the DNREC's satisfaction, that the subsurface conditions and contaminant plume relating to such release have been adequately characterized in the Phase I RFI and that the proposed corrective measures will adequately remove, contain, or treat the released hazardous waste or hazardous constituents as necessary to protect human health and the environment. Conditions for releases to other media shall likewise be adequately characterized. The DNREC shall review such proposal and notify the Permittee of its approval or disapproval of such proposal. No term or condition of this

Permit shall be affected by such proposal until such time as this Permit has been modified to include such proposal. The DNREC or Permittee, will seek modification of this permit pursuant to the DRGHW, §122.41 or §§ 122.42 and 124.5 to include such proposal.

1. Phase II RCRA Facility Investigation Plan Submission:

The Phase II RFI Work Plan must be approved by the DNREC in accordance with Permit Conditions I.G. (Approval/Disapproval of Submissions Resolution). This Phase II RFI Work Plan shall meet the objectives and requirements specified below:

The Phase II RFI objectives are to:

- a. Fill in the data gaps regarding the presence, magnitude, extent, direction, concentration and rate of migration of releases of hazardous waste or hazardous constituents from each SWMU, detected during the Phase I RFI;
- b. Gather all data necessary to complete the Groundwater and Human Health Environmental Indicators for the site; and
- c. Further evaluate the need for and scope of corrective measures.

2. Phase II RCRA Facility Investigation Plan Requirements:

a. The RFI Phase II Work Plan shall be prepared in accordance with the EPA Guidance for RCRA Facility Investigations, available at http://www.epa.gov/reg3wcmd/ca/ca_resources.htm, under Corrective Action Implementation Guidance. The Work Plan shall include the following sections: Project Management Plan, Sampling and Analysis Plan, Health and Safety Plan, Community Relations Plan, and Schedule.

The Health and Safety Plan shall be prepared in accordance with appropriate guidance such as <u>Standard Operating Safety Guides</u>, USEPA, July 1988, and OSHA regulations at 29 CFR § 1910.120. While the DNREC may comment on the Health and Safety Plan, the DNREC will not approve or disapprove the Plan.

b. Phase II RFI Sampling and Analysis Plan:

- i. The Permittee shall submit a Phase II RFI Sampling and Analysis Plan (Plan). The Plan shall provide for analysis of hazardous waste and/or hazardous constituents released from each SWMU. All aqueous samples shall also be tested for pH. The Permittee shall propose a list of constituents for groundwater monitoring and analysis that considers the constituents specified in § 264 of the DRGHW, Appendix IX, Groundwater Monitoring List. Any hazardous constituent that is known or suspected by the Permittee to have been treated, stored, disposed or contained in the unit, shall also be included for analysis.
- ii. The Phase II RFI Sampling and Analysis Plan shall provide the rationale for the selection of sample locations and number of samples. The Permittee shall identify the specific sampling locations for each SWMU and for each affected environmental media.

- iii. The Phase II RFI Sampling and Analysis Plan shall include Sample Collection Methods and Procedures Plan and a Quality Assurance Project Plan. The Permittee shall also furnish to the DNREC the Laboratory Data Package.
- iv. The DNREC reserves the right to require the Permittee to furnish the DNREC with split samples for any samples taken by the Permittee pursuant to this Permit. Where split samples are taken and analyzed, the DNREC will provide the results to the Permittee for evaluation in the Phase II RCRA Facility Investigation Report. The Permittee shall identify a procedure in the Sampling Plan for notifying the DNREC of any planned sampling dates.
- v. The Phase II RFI Sampling Plan must identify the management and disposition of any wastes generated as a result of the investigation. If any of the SWMUs contain hazardous waste, the Permittee shall comply with applicable regulations including the Land Disposal Restrictions as contained in § 268 of the DRGHW.

3. Phase II RCRA Facility Investigation:

- a. The Permittee shall conduct the investigations in accordance with the EPA Guidance for RCRA Facility Investigations, available at http://www.epa.gov/reg3wcmd/ca/ca_resources.htm, under Corrective Action Implementation Guidance. This investigation is necessary to characterize the facility (Environmental Setting), define the source of any release of hazardous waste or hazardous constituents (Source Characterization), define the degree and extent of contamination (Contamination Characterization) and identify actual or potential receptors.
- b. The investigations must result in data of adequate technical quality to support the development and evaluation of the corrective measure alternative(s) during the Corrective Measures Study. The Permittee shall implement the plan requirements described in Permit Condition II.E.2.

4. Phase II RCRA Facility Reporting Requirements:

- a. The Permittee shall fulfill the requirements of the approved Phase II RFI Plan in accordance with the terms and schedule set forth in such approved plan, including the submission of a Phase II RFI Report for the DNREC's approval. The Permittee shall submit copies of the Phase II RFI Report to the DNREC. The Permittee shall also submit quarterly (i.e., every four months) progress reports to the DNREC, beginning four months after the DNREC's approval of the plan and continuing until the RFI Report is submitted. The quarterly reporting shall include, at a minimum: activities completed within the reporting period, any deviations from the Phase II RFI Plan, and the identification and schedule of remaining activities. The DNREC shall include any other specifications in its approval of the Phase II RFI Plan.
- b. The Permittee may request an alternate progress-reporting schedule for the DNREC's approval. This request shall be submitted in writing and provide a justification for the alternate schedule. This alternate progress-reporting schedule may be approved by the DNREC without requiring a permit modification to Permit Condition II.E.4.

5. Phase II RCRA Facility Investigation Report:

a. The Permittee shall submit a Phase II RCRA Facility Investigation (RFI) Report to the

b. The Phase II RFI Report shall include a discussion of the need for and feasibility of implementing interim measures immediately, (see Permit Condition II.B., Interim Measures).

II.F. CORRECTIVE MEASURES STUDY:

- 2. Within ninety (90) days of receipt of the DNREC's written approval of the CMS Plan, the Permittee shall begin implementation of the approved CMS Plan. In accordance with the terms and schedules in the approved CMS Plan, the Permittee shall submit for the DNREC's approval, a CMS Report which recommends a Corrective Measure(s) in accordance with the applicable requirements of EPA Guidance, available at http://www.epa.gov/reg3wcmd/ca/ca_resources.htm.

II.G. CORRECTIVE MEASURES IMPLEMENTATION:

1. Corrective Measures Remedy Selection:

Based on reports and information submitted by the Permittee during the RFI, the CMS, and other relevant information, the DNREC may require the Permittee to evaluate further, and report upon, one (1) or more additional remedies or develop particular elements of one (1) or more proposed remedies. DNREC will evaluate the CMS and approve a remedy in accordance with the evaluation criteria in the CMS Guidance and other applicable requirements. Such remedial requirements will be incorporated into this Permit pursuant to § 6305(a)(3) of 7 Del. C., Chapter 63, and §§ 122.41 and 122.42 of the DRGHW.

2. Corrective Measures Implementation:

a. Within ninety (90) days of receipt of the DNREC's written approval of the Corrective Measures Remedy, the Permittee shall submit a Corrective Measure Implementation (CMI) Work Plan, including a Schedule, for the DNREC's approval in accordance with the EPA Guidance, available at http://www.epa.gov/reg3wcmd/ca/ca_resources.htm. After approval of the CMI Work Plan, the Permittee shall submit the Corrective Measure Design Reports to the DNREC in accordance with the EPA Guidance, available at http://www.epa.gov/reg3wcmd/ca/ca_resources.htm.

- b. The Corrective Measure Final Design Report shall be submitted to the DNREC as a Class III Permit Modification request in accordance with the requirements of § 122.42 of the DRGHW. Upon completion of the public notice and public meeting requirements and upon the DNREC's approval of the CMI Final Design Report, the Permittee shall develop and implement construction in accordance with procedures, specifications, and schedules in the approved Final CMI Design Report and CMI Work Plan in accordance with the EPA Guidance, available at http://www.epa.gov/reg3wcmd/ca/ca_resources.htm.
- d. CMI Progress Reports shall be provided on a quarterly and annual basis to the DNREC as delineated in accordance with the EPA Guidance, available at http://www.epa.gov/reg3wcmd/ca/ca_resources.htm.

II.H. EVALUATION OF THE SELECTED REMEDY:

Commencing one (1) year from the submittal date of the final CMI Report, the Permittee shall submit an annual progress report on the remedy performance. If DNREC determines that the selected remedy will not comply with the media clean-up requirements, the DNREC may require the Permittee to perform additional studies and/or perform modifications to the existing Corrective Action remedy. If necessary, the DNREC or the Permittee may seek modification of this Permit pursuant to § 6305(a)(3) of 7 Del. C., Chapter 63, and §§ 122.41 and 122.42 of the DRGHW to implement modifications to the existing Corrective Measures Remedy.

II.I. EMERGENCY RESPONSE; RELEASE REPORTING:

1. Emergencies:

If, at any time during the term of this Permit, the Permittee discovers that a release of hazardous waste or hazardous constituents at or from the facility is presenting or may present an imminent and substantial endangerment to human health or the environment, and such release is not subject to the Contingency Plan and Emergency Procedures as defined in the portion of the RCRA Permit issued by the DNREC, the Permittee shall:

- a. Notify the DNREC as soon as practicable of the source, nature, extent, location and amount of such release, the endangerment posed by such release and the actions taken and/or to be taken, to the extent known, to address such release. Such notification shall be confirmed in writing within three (3) business days of discovery of such release.
- b. Unless otherwise directed by the DNREC, immediately take such actions as are necessary and appropriate to address such release.

2. Releases:

The Permittee shall notify DNREC in writing of the nature, source, extent, and location of a release of hazardous waste or hazardous constituents at or from the facility within seven (7) business days of discovery of such release which:

- a. Is not being addressed by corrective measures at the time of such discovery;
- b. Is not being addressed pursuant to permit conditions II.B., Interim Measures, or II.I.1, Emergencies;
- c. Is not being addressed under the Contingency Plan and Emergency Procedures; and
- d. Is not subject to reporting under the "Reporting of a Discharge of a Pollutant or an Air Contaminant" program at 7 DE Admin. Code § 1143 because the release is believed to be at or below the Delaware Reportable Quantity for such hazardous waste or hazardous constituent.
- 3. Based on the information submitted in Permit Condition II.I.2 (Releases), the DNREC may require the SWMU to be included in an ongoing RCRA Facility Investigation or may require Interim Measures (see Permit Condition II.B.).
- 4. Nothing in this Permit shall limit the DNREC's authority to undertake or require any person to undertake response action or corrective action under any law, including but not limited to, 7 <u>Del. C.</u> Chapter 63, §§ 104 or 106 of CERCLA, 42 U.S.C. §§ 9604 or 9606, and § 7003 of RCRA, 42 U.S.C. § 6973. Nothing in this Permit shall relieve the Permittee of any obligation it may have under any law, including, but not limited to, § 103 of CERCLA, to report releases of hazardous waste, hazardous constituents or hazardous substances to, at or from the facility.

II.J. GUIDANCE DOCUMENTS:

In addition to the guidance documents specified elsewhere in this permit or attachments, the following websites provide links to all relevant guidance documents:

- 1. EPA's corrective action website: http://www.epa.gov/correctiveaction
- 2. EPA Region 3 website: http://www.epa.gov/reg3wcmd/correctiveaction.htm

II.K. SOLID WASTE MANAGEMENT UNIT (SWMU) ASSESSMENT:

- 1. The Permittee shall notify the DNREC in writing, of any newly identified SWMU at the facility, no later than thirty (30) days after the date of discovery. The notification shall include, but not be limited to, the following known information:
 - a. A description of the SWMUs type, function, dates of operation, location (including a map), design criteria, dimensions, materials of construction, capacity, ancillary systems (e.g., piping), release controls, alterations made to the unit, engineering drawings, and all closure and post-closure information available, particularly whether wastes were left in place.
 - b. A description of the composition and quantities of solid wastes processed by the units with emphasis on hazardous wastes and hazardous constituents.

- c. A description of any release (or suspected release) of hazardous waste or hazardous constituents originating from the unit. Include information on the date of release, type of hazardous waste or hazardous constituents, quantity released, nature of the release, extent of release migration, and cause of release (e.g., overflow, broken pipe, tank leak, etc.). Also, provide any available data that quantifies the nature and extent of environmental contamination, including the results of soil and/or groundwater sampling and analysis efforts. Likewise, submit any existing monitoring information that indicates releases of hazardous waste or hazardous constituents has not occurred or is not occurring. The Permittee may refer to information regarding releases previously submitted to the DNREC under Permit Condition II.I. (Emergency Response; Release Reporting) and II.B (Interim Measures).
- d. A discussion of the need for and feasibility of implementing interim measures immediately, see Permit Condition II.B. (Interim Measures).
- 2. Upon receipt of the notification of any newly identified SWMU, the DNREC will determine the need for corrective action at such SWMU. If corrective action is necessary to protect human health or the environment considering site-specific risk and other site-specific factors, the DNREC will determine whether a RCRA Facility Investigation will be performed and the need for and scope of any Interim Measures, and modify the Permit to include such requirements pursuant to DRGHW § 122.41.
- 3. Within the time specified in the approved RCRA Facility Investigation Plan, the Permittee shall submit the RCRA Facility Investigation Report fulfilling the requirements of Permit Conditions II.E.3 through II.E.5.
- 4. In lieu of a separate RCRA Facility Investigation, the Permittee may propose either to incorporate any newly identified SWMU into an ongoing RCRA Facility Investigation or to submit a proposal for the performance of corrective measures at such newly identified SWMU in accordance with the provisions of Permit Condition II.A. Any such proposal shall be submitted to the DNREC along with notification of the discovery of the SWMUs.

II.L. <u>FINANCIAL ASSURANCE</u>:

1. Initial Cost Estimate:

Assurances of financial responsibility for corrective action must be provided in accordance with conditions herein. Within ninety (90) calendar days of receipt of the Department's written approval of the Corrective Measures Remedy, the Permittee shall submit an initial cost estimate for completing the approved remedy(ies). The initial estimate may be based on the Corrective Measure Study, the approved remedy(ies), or any other available information.

2. Cost Estimate Updates:

The cost estimate for completing the approved remedy(ies) shall be updated pursuant to the development of more detailed information (e.g., Corrective Measure Design) and any modifications to the approved remedy(ies).

3. Financial Assurance Demonstration:

Within thirty (30) calendar days of approval of the initial cost estimate for financial assurance (see Permit Condition II.L.1.), the Permittee shall demonstrate compliance with financial assurance to

the DNREC for completing the approved remedies in accordance with 40 C.F.R. § 264.101(b). Within thirty (30) calendar days of approval of any revised cost estimate (see Permit Condition II.L.2.), the Permittee shall demonstrate to the DNREC financial assurance for the updated cost estimates.

II.M. RECORDKEEPING:

Upon completion of closure of any SWMU, the Permittee shall maintain in the facility operating record, documentation of the closure measures taken.

II.N. ACCESS FOR CORRECTIVE ACTION OVERSIGHT:

The DNREC and its authorized representatives shall have access to the facility at all reasonable times for the purpose of monitoring compliance with the provisions of this Permit. The Permittee shall use its best efforts to obtain access to property beyond the boundaries of the facility at which corrective action is required by this Permit (see § 3004(v) of RCRA, 42 U.S.C. § 6924(v) and § 264.101(c) of the DRGHW); (1) for itself and any contractor of the Permittee for the purpose of taking corrective action required by this Permit, and (2) for DNREC and its authorized representatives for the purposes described in this paragraph.

II.O. <u>COMPLETION OF REMEDY</u>:

Within ten (10) days of receipt of notification by the DNREC that the remedy is complete, the Permittee shall submit a written certification to the DNREC registered mail stating that the remedy has been completed in accordance with the requirements of this Permit Modification. The certification must be signed by the Permittee and by an independent registered Professional Engineer registered in the State of Delaware.

II.P. EXTENSION OF DEADLINES:

Extensions of the due date for any submittal under this Permit may be granted by DNREC without a permit modification, based on the Permittee's demonstration that sufficient justification for the extension exists. Unless exigent circumstances are determined by DNREC to exist, all requests for an extension shall be submitted in writing no less than two weeks before the applicable deadline, and no extension shall be effective until DNREC approves the request in writing.

NCM: RLC: dtd DuPont Edgemoor/Permits/RLC06014